

WHAT IS CLAIMED IS:

1. A vehicle antenna comprising:

an antenna element which is fixed to a dielectric portion
5 in an exterior part of a vehicle body;

a high-frequency grounding member which is disposed in
the vicinity of a power supply point of the antenna element and
which is fixed to a conductive portion of the vehicle body so
as to be capacitance-coupled for carrying out electric grounding
10 with regard to a high-frequency component; and

an amplifier which is disposed in the vicinity of the power
supply point for amplifying a high-frequency reception signal
which is inputted from the power supply point.

15 2. The vehicle antenna according to claim 1, wherein
the amplifier is directly connected to the power supply
point and the high-frequency grounding member.

3. The vehicle antenna according to claim 1, wherein
20 the amplifier is connected to the power supply point and
the high-frequency grounding member through a coaxial cable.

4. The vehicle antenna according to claim 1, wherein
the amplifier outputs an amplified high-frequency
25 reception signal through a coaxial cable, and

in the vicinity of a portion in which the coaxial cable is connected to an in-vehicle unit for carrying out processing of the high-frequency reception signal, electric grounding with regard to a direct current component of the amplifier is carried
5 out to the vehicle body.

5. The vehicle antenna according to claim 1, wherein a surface of the conductive portion of the vehicle body is covered with an electric insulation film, and
10 the high-frequency grounding member is a metal thin plate member which is stuck on the electric insulation film.

6. The vehicle antenna according to claim 1, wherein a plurality of antenna elements are connected to the
15 amplifier, and
common grounding of a high-frequency portion with regard to the plurality of antenna elements is carried out to the high-frequency grounding member.

20 7. The vehicle antenna according to claim 6, wherein a switch for selecting an antenna element for amplifying a high-frequency reception signal, from the plurality of antenna element is built in the amplifier.

25 8. A diversity receiving apparatus comprising:

a plurality of antenna elements which are fixed to a dielectric portion in an exterior part of a vehicle body and whose power supply points are disposed closely;

5 a high-frequency grounding member which is disposed in the vicinity of the power supply point of the plurality of antenna elements and which is fixed to a conductive portion of the vehicle body so as to be capacitance-coupled for carrying out electric grounding in common with regard to a high-frequency component;

10 an amplifier which is disposed in the vicinity of the power supply point for amplifying a high-frequency reception signal which is inputted from the power supply point;

a switch which is disposed in the amplifier for selecting an antenna element for amplifying a high-frequency reception signal; and

15 a selective reception unit for selecting an antenna element by which good reception quality with regard to the high-frequency reception signal is obtained by carrying out processing of the high-frequency reception signal which is amplified by the amplifier and by controlling the switch remotely.

20

9. The diversity receiving apparatus according to claim 8, wherein

combinations of the plurality of antenna elements and the amplifier are disposed at different places of the exterior part
25 of the vehicle body, respectively, and

the selective reception unit carries out selection of the plurality of amplifiers and selection of an antenna element which is connected to the amplifier.